Project Description

Gibsonville Healthy Forest Restoration Project

Feather River Ranger District
Plumas National Forest
Sierra County, California

The Feather River Ranger District, Plumas National Forest, desires to reduce the risk of wildfire, to protect, restore, and enhance forest ecosystem components, and to restore and protect historic properties on National Forest System (NFS) lands in the vicinity of the historic townsite of Gibsonville, California. The project area overlaps portions of Sierra County.

The foothill areas of the Feather River Ranger District are dotted with communities, many dating back to early mining and logging days of the mid to late 1800s. Land ownership is a complex mosaic of checkerboard private ownership, community areas and privately held mining claims with NFS lands intermixed. Forested areas are often densely vegetated Sierran mixed conifer forests with a high probability of burning hot and fast in the event of a wildfire. Some areas have been logged or received other vegetation treatments over the years.

The town of Gibsonville which was established in 1851 by James Gibson who staked a mining claim he called Secret Ravine. His camp eventually grew into the town of Gibsonville which by 1853 had five blacksmiths, eleven general stores, five hotels, a jeweler, four express companies, two sawmills, a bowling alley, two saloons, a lawyer, one newspaper and one livery stable. During the 1850's miners from the surrounding area came to town on Sundays to watch bull and bear fights. Accounts from 1855 give a town population of 700 people which declined to 200 by the 1880's. By the 1870's there was an established Chinatown within Gibsonville. In the 1890's the town continued to decline and by the 1920's only four people still lived in the town. Large portions of the town were destroyed by hydraulic mining that took place during the 1930's and 40's.

Today the historic townsite is still visited and is a popular place for dispersed camping. In recent years there has been a marked increase in looting on the townsite which has been destroying its intact archaeological features. It is believed that by increasing the visibility across the site, people who are vandalizing and looting will have a harder time concealing their activities. We believe that increased visibility will help protect the site, helping with the Forests long term management of the Gibsonville townsite.

An important part of the mission of the Forest Service is the management of aquatic species and habitats, including the restoration and maintenance of diverse communities of rare flora and fauna.

One of the most unique features found within the landscape of the Sierra Nevada range is a healthy, viable aspen stand. Aspen provide a specific niche for wildlife in the form of forage and shelter. The cloning nature of aspen is a source of scientific interest as well as culturally for their fall beauty and historical value as a canvas for arborglyphs. An extensive study done by entomologist Daniel Cluck shows that 90 percent of aspen stands surveyed in the Sierras are

being affected by conifer competition. Of that study, 100 percent of the aspen stands observed on the Plumas National Forest are being suppressed by conifer competition, leaving aspen populations in various states of decline (Cluck 2010). Shading from competition leaves aspen vulnerable to disease and infection and inhibits successful growth and vitality of sucker as well as mature trees. Aspen regeneration in the Sierras is dependent on cloning from the roots of interconnected trees. Successful regeneration is accomplished through root disturbance which stimulates the sprouting process, along with warmer soil temperatures and increased sunlight (Sheppard 1993). Removing conifer competition would meet the specific requirements needed to initiate aspen regeneration as well as provide an ideal microclimate for viable sucker growth (Doucet 1989; Navratil 1991).

Healthy streams and rare wet meadow plant communities are dependent on the natural balance of functioning hydrological processes featuring clean water and saturated soils. Meadow potential zones are areas that historically were open meadows, but due to the suppression of fire have been encroached upon by conifer trees. Removing conifer competition would meet requirements needed in order to improve and protect meadow habitats.

There is a need for ensuring the sustainability of the benefits provided by natural resources on NFS lands that support human wellbeing through the generation of income and employment opportunities for residents of the immediate area, and through production of goods (timber, biomass) and services in local and regional markets. Receipts from sale of forest products can provide partial funding for the required noncommercial thinning and burning of fuel treatments that are crucially needed but largely unfunded.

Location

The project area is located approximately 6-8 miles northeast of La Porte, CA, in and around the historic townsite of Gibsonville. County Road 511 (Quincy-La Porte Road) traverses the project area. The legal description of the project area is portions of:

Mount Diablo Meridian, California,
T. 22 N., R 9 E., sections 25, 35 and 36; and
T. 22 N., R 10 E., sections 17, 19, 20, 29 and 30.

Purpose of and Need for the Project

The Healthy Forests Restoration Act (HFRA) of 2003 authorizes the Forest Service to implement hazardous fuel reduction projects to reduce wildfire risk to at-risk public lands; to enhance efforts to protect watersheds and address threats to forest health, including catastrophic wildfire, across the landscape; and to protect, restore, and enhance forest ecosystem components, to promote the recovery of threatened and endangered species, improve biological diversity, and enhance productivity and carbon sequestration.

The purpose of the project is to retain and restore the ecological resilience of NFS lands, while providing for a broad range of services to humans and other organisms. Ecological resiliency refers to all stages of forest development. Not only the ecosystem's ability to absorb small drivers and stressors (disturbances like wildfire, insects and diseases) and prevent them from amplifying into larger ones, but also its capacity to recover afterwards.

Specific purposes of the project are to:

- Remove hazard trees along roadways and from within the Gibsonville townsite to make these areas safer and increase roadside viewing distances for motorists, local residents, recreationists and other forest users;
- Thin vegetation to increase visibility and protect the Gibsonville townsite;
- Thin vegetation to release aspen from conifer suppression;
- Thin vegetation to restore meadow potential zones;
- Reduce ground, ladder and crown fuels by thinning trees and brush, thereby decreasing the likelihood of a severe wildfire spreading to private lands and structures or into California spotted owl and/or goshawk habitat;
- Utilize removed material – timber and smaller trees – to create an economic benefit locally and generate partial funding for the required noncommercial thinning and burning fuel treatments; and
- Remove invasive plants from the project area.

Proposed Action

In order to achieve the goals and meet the purpose and need for action described above, the Feather River Ranger District proposes a combination of vegetation treatment activities in the project area (approximately 1,194 acres). The project would be implemented as soon as is feasible after a decision is reached and should take one to three years to complete. Future maintenance involving the removal of excessive regrowth fire fuels – generally brush and small trees – in the project area would likely be necessary to retain the desired condition of this landscape and is considered in the scope of this project.

The following activities are proposed:

- Removing all hazard trees within 200 feet of roads and structures and within the historical Gibsonville townsite;
- Thinning of trees less than 30 inches in diameter along road corridors within approximately 200 feet of the road resulting in 30-40 percent average canopy cover;
- removal of conifers by individual tree selection within approximately 30 acres of aspen stands including sawlogs 10 inches in diameter at breast height (DBH) and greater, as well as biomass conifers 3 inches to 9.9 inches DBH. Select ponderosa and Jeffrey pine trees greater than 30 inches DBH will be retained for wildlife purposes, structure, and species diversity as well as retention of exceptionally large conifers for aesthetic value. Species such as lodgepole pine and white fir will not be retained because of their vigor in encroaching meadows as well as the prolific seeding that is common for white fir;
- removal of conifers by individual tree selection within approximately 100 acres of meadows and alder including sawlogs 10 inches in diameter at breast height (DBH) up to 16 inches DBH, as well as biomass conifers 3 inches to 9.9 inches DBH. Mastication and mechanical thinning may treat up to the meadows and alders edge. In units where hand cut pile burn is proposed, conifers up to 16 inches in DBH inside meadows and out to 75 feet from meadows edge will be felled. Conifers less than 10 inches in DBH will be piled and burned. Conifers between 10 to 16 inches in DBH will be lopped and scatter or simply felled. The objective of these treatments is to remove the seed source that is encroaching and enhance their health while making them more fire resilient;

- Removal of conifers less than 30 inches DBH by individual tree selection using a Variable Density Thinning (VDT) will occur on the approximately 122 acres of historic Gibsonville townsite restoration.
- Removal of conifers less than 30 inches DBH by individual tree selection using a Variable Density Thinning (VDT) would occur on approximately 330 acres. VDT is a compilation of various thinning treatment elements: a) structural thinning and b) radial release of fire-resilient legacy trees in areas beyond the 200-feet road corridor buffer, aspen stands, meadow potential zones, and townsite resulting in 40 percent average canopy cover; thinning would be thinning from below to remove small and medium sized trees first and generally retaining the largest healthiest trees;
- California spotted owl protected activity centers (PACs) and home range core areas (HRCAs) would receive lighter thinning treatments or no removal of merchantable-sized trees depending on site conditions;
- Commercial-sized timber resulting from the thinning would be offered for sale;
- Smaller material – trees – would be offered for sale as biomass, firewood or other small-log uses;
- Resulting slash and other woody debris would be piled and burned;
- In some areas, mastication equipment would be used to thin and chip brush and small trees onsite; areas unsuitable for mastication, such as owl PACS, would treated by hand-cutting and piling;
- Underburning – prescribed fire – over much of the area is anticipated;
- In some stands there is no treatment proposed;
- Known and encountered non-native invasive plants – weeds – would be removed; all project activities would be done in accordance with best management practices for controlling invasive plants.

Treatment	Sum of Acres
Aspen Release and Biomass	10.6
Hand Cut Pile Burn and Under Burn	290.8
Masticate and Under Burn	18.1
Masticate and Under Burn and Biomass	26.3
Masticate or Hand Cut Pile Burn or Under Burn	136.7
Meadow Restoration and Biomass	15.3
Meadow Restoration Aspen Release and Biomass	7.2
Roadside Hazard and Hand Cut Pile Burn	54.4
Roadside Hazard and Hand Cut Pile Burn and Biomass	60.6
Under Burn	7.1
Variable Density Thinning 40% and Under Burn and Biomass	421.1
No Treatment	146.0
Grand Total	1,194.20

Some existing roads would be used as logging haul roads and/or access roads for equipment to complete project activities. Approximately 1.7 miles of temporary roads would be needed to perform the activities proposed for the project. These roads would be rehabilitated and/or returned to their original condition at the end of the project.

The Forest Service would use specific treatment methods to achieve the desired results for the project. The following list briefly describes the treatment methods proposed:

Hazard Tree Removal: Removal of trees deemed hazardous or dangerous based on Forest Services handbook standards for identifying such trees. This is generally done within two tree heights, or approximately 200 feet, from roads or structures.

Mechanical Thinning (timber removal): Removal of saw-timber sized trees (10 - 29.9 inches diameter breast height (DBH)) to thin the stand and remove ladder and canopy fuels. The goal is to increase ground-to-crown height, increase spacing between trees, and increase the spacing between tree crowns. Approximately 40 percent canopy cover would be retained on average over all treatment units, with a 30% canopy cover target near roads transitioning to 50% canopy approximately 200 feet from roads. The purpose of the 30% canopy cover standard near roads is to create safer conditions for firefighters to establish a fireline there. A fire will generally "lay down" to a ground fire when the flames cannot move from treetop to treetop. In aspen release sites trees 30 inches and greater DBH would also be selectively removed.

The priority for thinning would be the removal of the smaller, suppressed, and intermediate-crown class trees (10-16 inches DBH), and removal of some co-dominant and dominant trees with crowns underneath and adjacent to healthy large trees. The preferred species for residual trees in this are shade-intolerant species where they exist. In order of preference, the shade-intolerant species are ponderosa pine, black oak, sugar pine, Douglas-fir, incense-cedar, and true fir.

Mechanical thinning generally utilizes wheeled or tracked processing machines that cut, buck and limb trees onsite. Often, a separate machine carries or drags the logs to the landing area where they are stacked and stored for transport to a mill.

Biomass Removal: Removal of surface and ladder fuels (trees 3 - 9.9 inches) following the guidelines stated above for mechanical thinning. Many ladder fuels fall into this size range. Biomass removal allows the option for these trees to be sold for small log uses rather than cut, piled and burned on site.

Mastication: Removal of woody shrubs and trees using mechanical ground-based equipment to grind harvest residue or thin small trees. Shrubs and trees less than 10 inches DBH would be masticated, unless the trees are needed for the desired spacing. Most masticated trees would be less than 6 inches DBH.

Cut and pile (grapple or hand pile) and/or underburn: Removal of shrubs and trees up to 10 inches DBH by manually cutting using chainsaws. These ground and ladder fuels are removed from beneath overstory trees, and/or aggregations of small-diameter conifers or plantation trees. The spacing of residual conifers and black oaks would be generally 18-24 feet to allow retention of the healthiest, largest, and tallest conifers and black oaks and to avoid creating openings where future regrowth would be likely. The cut trees, shrubs, and existing slash would be manually piled and burned. Underburning is prescribed ground fire designed to reduce fuels on the ground.

The following table and map identifies the specific treatment(s) proposed in each treatment unit within the project area. The table lists the most aggressive treatments that may be used in each unit. The environmental assessment will analyze this level of treatment. In the end, lighter treatments may be used in some units based on site conditions, resource considerations and access.

Note that unit numbers in the first column of the table refer to the unit numbers on the map.

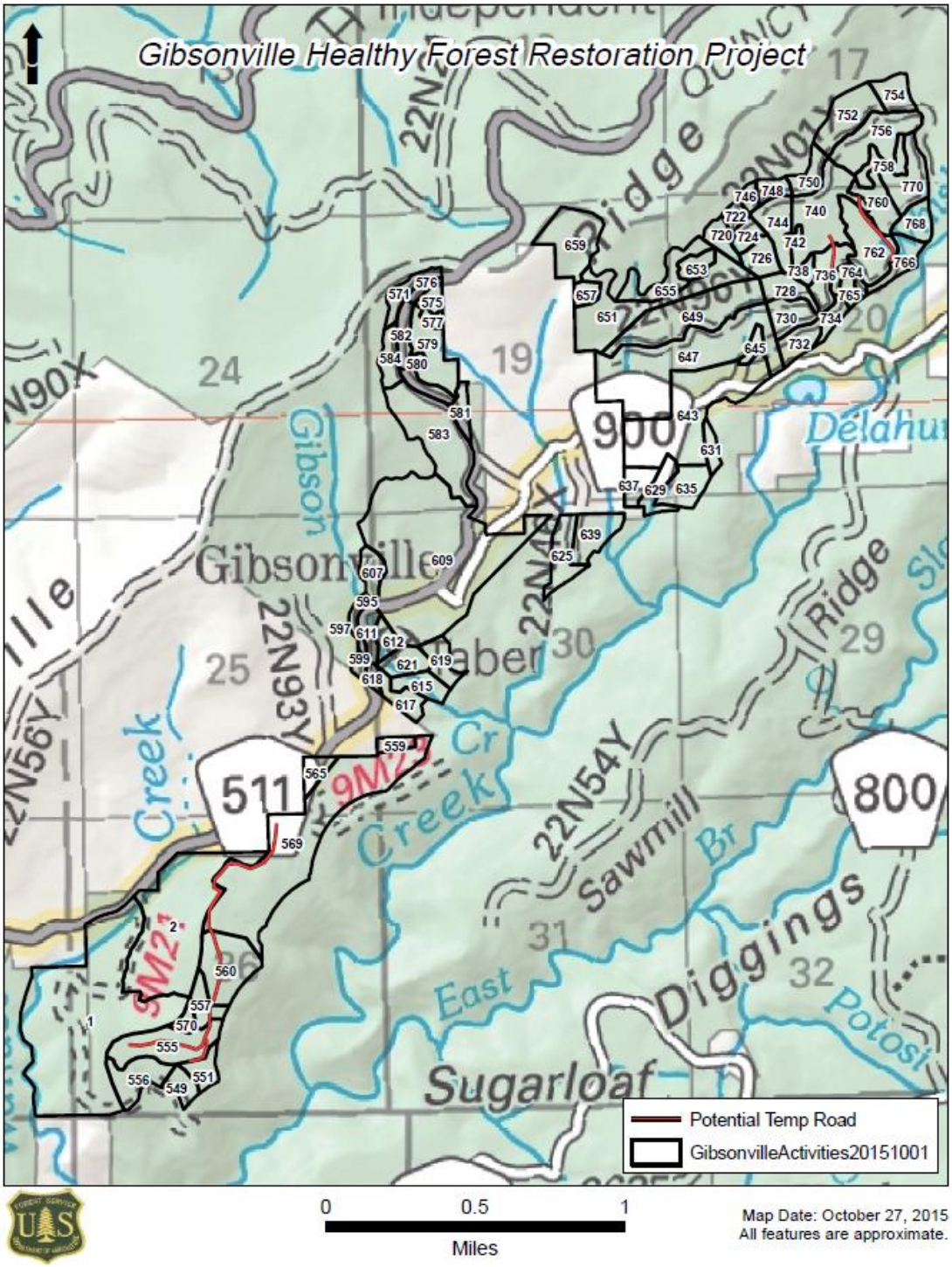
Unit number	Hazard tree removal	Mechanical thinning (timber removal)	Biomass removal	Mastication	Cut and pile and/or underburn	Acres
1					Yes	130.73
2				Optional	Yes	70.56
549					Yes	5.72
551		Yes	Optional		Yes	6.68
555		Yes	Optional		Yes	22.95
556					Yes	13.62
557		Yes	Optional		Yes	7.24
559					Yes	3.49
560		Yes	Optional		Yes	22.94
565	Yes		Optional		Yes	5.45
569					Yes	88.77
570		Yes	Optional		Yes	2.99
571			Optional	Optional	Yes	6.82
575		Yes	Optional			3.71
576	Yes		Optional		Yes	2.64
577		Yes	Optional			2.24
579		Yes	Optional		Yes	16.87
580		Yes	Optional			6.62
581	Yes		Optional		Yes	5.07
582	Yes		Optional		Yes	6.01
583		Yes	Optional		Yes	35.57
584	Yes		Optional		Yes	7.27
595	Yes		Optional		Yes	0.89
597	Yes		Optional		Yes	3.33
599	Yes		Optional		Yes	2.27
607						6.59
609		Yes	Optional		Yes	121.79
611	Yes		Optional		Yes	5.94
612		Yes	Optional		Yes	4.93
615		Yes	Optional		Yes	7.94
617		Yes	Optional		Yes	7.35
618	Yes		Optional		Yes	2.42
619		Yes	Optional		Yes	7.63
621		Yes	Optional		Yes	8.31
625						11.86
629						7.03
631						3.99
635						11.52
637	Yes		Optional		Yes	6.96
639						12.33
643	Yes				Yes	54.45
645						3.03
647				Optional	Yes	66.10
649					Yes	34.54

Unit number	Hazard tree removal	Mechanical thinning (timber removal)	Biomass removal	Mastication	Cut and pile and/or underburn	Acres
651						35.06
653						5.45
655						13.41
657						3.99
659						21.98
720					Yes	5.82
722					Yes	4.11
724						5.12
726		Yes	Optional		Yes	8.03
728				Optional	Yes	8.33
730				Optional	Yes	9.73
732					Yes	8.13
734		Yes	Optional		Yes	4.92
736		Yes	Optional		Yes	11.25
738		Yes	Optional			2.72
740		Yes	Optional		Yes	29.44
742						1.69
744		Yes	Optional		Yes	12.85
746					Yes	2.94
748		Yes	Optional		Yes	4.74
750		Yes	Optional		Yes	7.24
752		Yes	Optional		Yes	16.87
754		Yes	Optional		Yes	8.31
756		Yes	Optional		Yes	21.60
758		Yes	Optional			7.25
760		Yes	Optional			10.64
762			Optional	Optional	Yes	19.49
764	Yes		Optional		Yes	4.24
765						2.96
766	Yes		Optional		Yes	8.11
768		Yes	Optional		Yes	8.10
770		Yes	Optional		Yes	14.56
Total Project Acres:						1194.20

California Spotted Owl Interim Recommendations for Management:

Under the terms of the settlement agreement signed last fall for the Sierra Nevada Forest Plan Amendment (SNFPA) litigation, we will include and analyze an alternative consistent with the *Draft Interim Recommendations for the Management of California Spotted Owl Habitat on National Forest System Lands 29 May 2015*. The recommended conservation measures provided in that document are based on the findings of the draft Conservation Assessment (May 2015), and represent a first approximation of actions available for consideration in the interim period between the development of the Conservation Assessment and implementation of a Conservation Strategy for the owl. These recommendations constitute a suite of measures that individually hold promise and support in scientific literature pertaining to owls and forest ecology, but they have not been field tested as a composite set of conservation measures. Thus, we cannot offer any certainty in terms of their benefits, only the potential for benefits based on the best available

science in the form of the draft Conservation Assessment. Final interim recommendations may be issued once the draft Conservation Assessment is reviewed and finalized. The bulk of the work of reconciling the challenges that face the conservation of old forest ecosystems in the Sierra Nevada will fall to the Conservation Strategy.


Gibsonville Healthy Forest Restoration Project
Potential Temp Road
GibsonvilleActivities20151001
0
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1
Miles
Map Date: October 27, 2015
All features are approximate.